



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,190	04/27/2000	Richard M. Wyatt	2037.2002-000	2260

21005 7590 09/29/2003

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER

WILSON, ROBERT W

ART UNIT PAPER NUMBER

2661

10

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/559,190

Applicant(s)

WYATT, RICHARD M.

Examiner

Robert W Wilson

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,12,13,17,24,25,27,30,37 and 38 is/are rejected.
- 7) ☒ Claim(s) 2-4,6-11,14-16,18-23,26,28-29, 31-36, and 39-42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2661

Detailed Action

1.0 The application of Richard Wyatt entitled "PORT PACKET QUEUEING" with filing date 4/27/2000 and without foreign priority was examined. Claims 1-42 are pending.

Drawings

2.0 The drawings in this application were approved by Draftsperson as formal.

Claim Rejections - 35 USC § 103

3.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4.0 Claims 1, 5, 12-13, 17, 24-25, 27, 30, and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Runaldue (U.s. Patent No.: 6,128,654)

Referring to **Claim 1**, Runaldue teaches: A queue (Abstract) comprising:

A first memory having a first memory access time (External Memory 36 per Fig 4 or first memory and col 6 line 55-col 8 line 12)

A second memory having a second access time (Output Queue or second memory per col 13 lines 43-50)

Control logic which enqueues in the queue a pointer to data to be transmitted by writing the pointer in the first memory and transferring the pointer to a second memory (Buffer Manager or control logic copies frame pointer from External Memory to appropriate Output Queue per col 6 line 55-col 8 line 12 and col 13 lines 43-50)

In Addition:

Art Unit: 2661

Regarding **Claim 5**, wherein the control logic dequeues the pointer by reading the pointer from the second memory (Buffer Manager clears or dequeues the pointer when all copies have been made per col 14 lines 47-67)

Regarding **Claim 12**, wherein a packet vector stored in the second memory includes a link to the next packet vector in the queue (port vector FIFO which is a part of the output queue per col 15 line 23-67)

Runaldue does not expressly call for: first access time and a second access time.

It would be obvious to one of ordinary skill in the art at the time of the invention that the External Memory would have a first access time and the output queue would have a second access time because they perform two different functions.

Referring to Claim 13, Runaldue teaches: A queuing method (Abstract) comprising the steps of:

Writing in a first memory a pointer to data to be transmitted having an access time (The pointer is written in External Memory 36 per Fig 4 or first memory which is associated with the frame to be transmitted and col 6 line 55-col 8 line 12)

Transferring the pointer to a second memory having a second memory access time (Buffer Manager or control logic copies or transfers the frame pointer from External Memory to appropriate Output Queue per col 6 line 55-col 8 line 12 and col 13 lines 43-50)

In Addition:

Regarding **Claim 17**, further comprising the step of: dequeuing the pointer from the second memory (The Buffer Manager clears or dequeues the pointer when all copies have been made per col 14 lines 47-67)

Art Unit: 2661

Regarding **Claim 24**, wherein a packet vector stored in the second memory includes a link to the next packet vector in the queue (port vector FIFO which is a part of the output queue per col 15 line 23-67)

Runaldu does not expressly call for: first access time and a second access time.

It would be obvious to one of ordinary skill in the art at the time of the invention that the External Memory would have a first access time and the output queue would have a second access time because they perform two different functions.

Referring to **Claim 25**, A queue (Abstract) comprising:

A first memory having a first memory access time (External Memory 36 per Fig 4 or first memory and col 6 line 55-col 8 line 12)

A second memory having a second access time (Output Queue or second memory per col 13 lines 43-50)

Means for controlling the queue enqueues in the queue a pointer to data to be transmitted by writing the pointer in the first memory and transferring the pointer to second memory (Buffer Manager or controlling means copies frame pointer from External Memory to appropriate Output Queue per col 6 line 55-col 8 line 12 and col 13 lines 43-50)

In Addition:

Regarding **Claim 27**, wherein the means for controlling the queue transfers a plurality of pointers to a second memory (Buffer Manager or control logic copies frame pointer from External to appropriate output queue per col 6 line 55-col 8 line 12 and col 13 lines 43-50)

Art Unit: 2661

Regarding **Claim 30**, wherein the means for controlling the queue dequeues the pointer by reading the pointer from the second memory (The Buffer Manager clears or dequeues the pointer when all copies have been made or read per col 14 lines 47-67)

Regarding **Claim 37**, wherein a packet vector stored in the second memory includes a link to the next packet vector in the queue (port vector FIFO which is a part of the output queue per col 15 line 23-67)

Runaldue does not expressly call for: first access time and a second access time.

It would be obvious to one of ordinary skill in the art at the time of the invention that the External Memory would have a first access time and the output queue would have a second access time because they perform two different functions.

Referring to **Claim 38**, A pointer list (Abstract) comprising:

A first memory having a first memory access time (External Memory 36 per Fig 4 or first memory and col 6 line 55-col 8 line 12)

A second memory having a second access time (Output Queue or second memory per col 13 lines 43-50)

Control logic which adds in the pointer list a pointer to data to be transmitted by writing the pointer to data to be transmitted by writing the pointer in the first memory and transferring the pointer to second memory and removes the pointer form the pointer list by reading the pointer from memory (Buffer Manager or control logic copies frame pointer from External Memory to appropriate output queue per col 6 line 55-col 8 line 12 and col 13 lines 43-50)

Runaldue does not expressly call for: first access time and a second access time.

Art Unit: 2661

It would be obvious to one of ordinary skill in the art at the time of the invention that the External Memory would have a first access time and the output queue would have a second access time because they perform two different functions.

Claim Rejections - 35 USC § 101

5.0 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 38 is rejected because it does not describe a useful process, machine, manufacture, or composition of matter.

Referring to Claim 38, The limitation “pointer list” is not a useful process, machine, manufacture, or composition of matter and consequently is rejected.

Claim Objections

6.0 Claims 2-4, 6-11, 14-16, 18-23, 26, 28-29, 31-36, & 39-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest prior art Runaldue teaches: an apparatus for multicasting frames by copying a frame and a pointer associated with the frame into an external memory next the pointer and pointer is put into the output queue.

The closest prior art does not disclose or anticipate the following limitations:

Regarding **Claims 2, 14, & 26**, “first memory access time is less than the second memory access time”

Regarding **Claims 3, 15, & 28**, “transfers or transferring a plurality of pointers to the second memory in a single transfer cycle”

Art Unit: 2661

Regarding Claims **4, 16, & 29**, “enqueues the pointer in the first memory in a single write operation”

Regarding Claims **6, 18, & 31**, “transferring the cache row to the second memory”

In Addition: Claims **7, 20, and 32** are dependent upon claims 7, 20, and 32 respectively and consequently would also be allowable.

Regarding claims **8, 19, and 33**, “partially filled cache row”

Regarding Claims **9, 21, and 34**, “entries in cache row ...are ordered by position in the cache row”

Regarding Claims **10, 22, & 35**, “two cache rows”

Regarding Claims **11, 23, & 36**, “includes a cache row entry and a counter of the number of pointers stored in a cache row entry”

In Addition: Claims **33, 41, & 42** depend upon 11, 23, and 36 respectively and consequently would also be allowable.

Conclusion

7.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner can normally be reached on M-F (8:00-4:30).

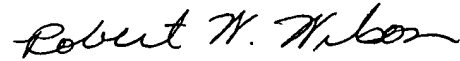
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Application/Control Number: 09/559,190

Page 8

Art Unit: 2661



Robert W Wilson

Examiner

Art Unit 2661

RWW



DANGTON
PRIMARY EXAMINER